

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 35, 36, 42, 45, 46, 52 and 53 are pending in the application, with 35 and 42 being the independent claims. Claims 35 and 42 are sought to be amended. New claims 52 and 53 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Support for the amendment to claim 35, and new claims 52 and 53, can be found, *inter alia*, at page 21, lines 15-23 and page 20, lines 17-19 of the specification. Additionally, support for the amendment to claim 35, and new claims 52 and 53, can be found, *inter alia*, in claims 39 and 41 filed in a preliminary amendment with the specification.

Support for the amendment to claim 42 can be found , *inter alia*, at page 39, lines 11-28 of the specification.

Based on the above amendments and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

***Rejections under 35 U.S.C. § 112, Second Paragraph***

The Examiner has rejected claim 42 under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. Specifically, the Examiner states that "it is unclear what is

encompassed by the phrase 'said peptide the Jak3 autophosphorylation site.'" (Paper No. 20040616, p. 3.)

Solely in an effort to expedite prosecution, and without acquiescence in the propriety of the rejection, Applicants have amended claim 42 to recite " wherein said DNA molecule encodes a peptide that includes an autophosphorylation site, said autophosphorylation site including the amino acid sequence KDYY...." Thus, Applicants consider the rejection to be moot and respectfully request that it be withdrawn.

***Rejections Under 35 U.S.C. § 102***

The Examiner has rejected claim 42 under 35 U.S.C. § 102(b) as allegedly being anticipated by PCT Publication No. WO 92/10519 to Wilks *et al.* and claims 35 and 36 as allegedly being anticipated by Littman *et al.*, *Nature* 326:85-88 (1987). Applicants respectfully traverse the rejection.

The Examiner contends that:

Wilks *et al.* disclose an isolated nucleic acid sequence of murine JAK2 that has nucleic acid sequences encoded [sic] the same amino acid residues 657-668, 942-953 and 1003-1018 of JAK 3 peptides [sic] of SEQ ID NO:16. Therefore, the isolated nucleic acid sequence of Wilks *et al.* will hybridize to a DNA sequence encoding amino acids of a Jak3 peptide of SEQ ID NO:16 under the recited conditions because of the presence of nucleic acid sequences encoding significant identical stretches of amino acid residues.

(Paper No. 20040616, p. 3-4) (citation omitted). Applicants disagree with the Examiner's statement that hybridization would occur under the hybridization conditions, set forth in claim 42, due to "the presence of nucleic acid sequences encoding significant identical stretches." Indeed, the amino acids the Examiner has indicated as being

identical (amino acid residues 657-668, 942-953 and 1003-1018 of SEQ ID NO:16) only encompass 36, 36 and 48 nucleotides respectively from a total of approximately 3297 nucleotides which encode the entire Jak3 peptide of SEQ ID NO:16. It is mere supposition on the Examiner's part that such hybridization with the Wilks sequence will occur.

Nevertheless, solely in an effort to advance prosecution, and without acquiescence in the propriety of the rejection, Applicants have amended claim 42 to recite "An isolated DNA molecule comprising at least 100 nucleotides." Thus, Applicants believe that the rejection based on Wilks *et al.* is now moot. Applicants respectfully request that the Examiner withdraw the rejection.

The Examiner also rejected claims 35 and 36 as allegedly being anticipated by Littman *et al.* Applicants respectfully traverse the rejection.

For a reference to anticipate under 35 U.S.C. § 102(b), "the reference must teach every aspect of the claimed invention either explicitly or impliedly." Manual of Patent Examining Procedure § 706.02(IV) (2004). The Littman *et al.* reference discloses a portion of the T $\gamma$  chain of the T-cell antigen receptor, CD3, which contains the sequence KDYY. Claims 35 and 36, however, are directed to a JAK 3 peptide of SEQ ID NO:16, thus the Littman *et al.* reference cannot be anticipatory because the reference does not disclose a JAK 3 peptide.

Furthermore, Applicants disagree with the Examiner's statement that "Littman *et al.* disclose a cDNA sequence comprising the amino acid sequence KDYY of SEQ ID NO:16, and at least one conservative amino acid substitution in the flanking sequences of the KDYY (see Fig. 2)." (Paper No. 20040616, p. 4.) The two amino acids which flank

the KDYY sequence in SEQ ID NO:16 are glycine and valine. The sequence of Figure 2 of Littman *et al.* discloses tryptophan and lysine flanking the KDYY sequence. A glycine to tryptophan and a valine to lysine substitution are generally not considered conservative substitutions. Additionally, according to the specification, in Table 1 (p.23), exemplary conservative amino acid substitutions for glycine and valine are alanine or proline and isoleucine or leucine, respectively. Additionally, the specification discloses alternative conservative amino acid substitutions in Table 2 (p.24). Neither tryptophan or lysine are considered conservative substitutions for glycine or valine respectively. Therefore, according to at least Tables 1 and 2 of the specification, tryptophan and lysine are not conservative amino acid substitutions for glycine and valine, respectively.

However, solely in an effort to expedite prosecution and without acquiescence in the rejection, Applicants have amended claim 35, from which claim 36 depends, to recite "a DNA sequence encoding at least 5 to 400 contiguous amino acids of a Jak3 peptide of SEQ ID NO:16...." Thus, the claims are directed to at least one additional Jak3 amino acid in addition to the KDYY sequence. As a result, Applicants believe that the rejection is moot and respectfully request withdraw of the rejection.

***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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